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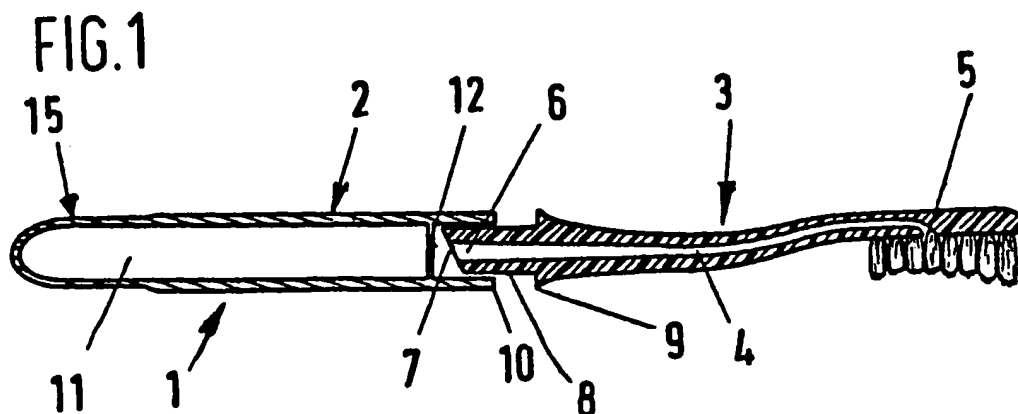
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## (54) Toiletry brush

(57) A toiletry brush (1) comprising a brush head (3) and a detachable handle (2), the head and handle being complementarily shaped (at 8, 9, 10) to connect with and engage one another, the head having a duct (4) between the handle connection and a brush array (5) on the head and the handle being a hollow reservoir for a toiletry and at least partially resiliently deformable; in an embodiment the handle mouth (10) is sealed by a rupturable membrane (12) and the brush head connection end (8) is shaped (at 7) to penetrate the membrane.

An alternative embodiment discloses a shaving brush.



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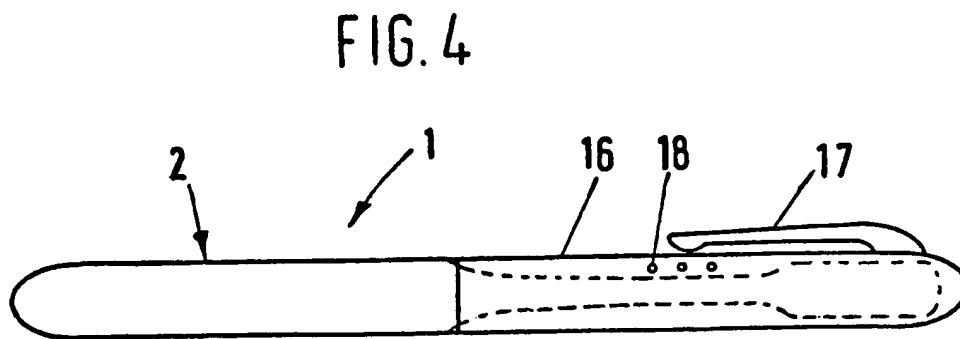
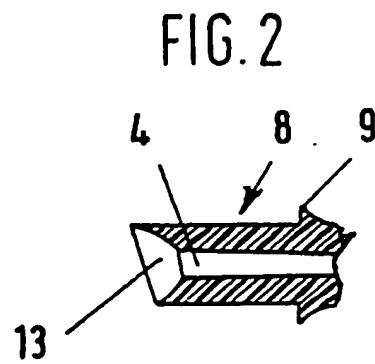
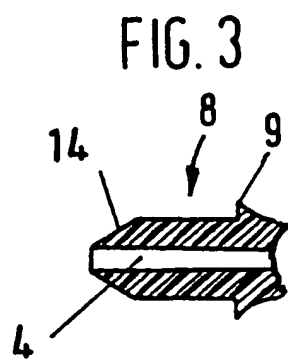
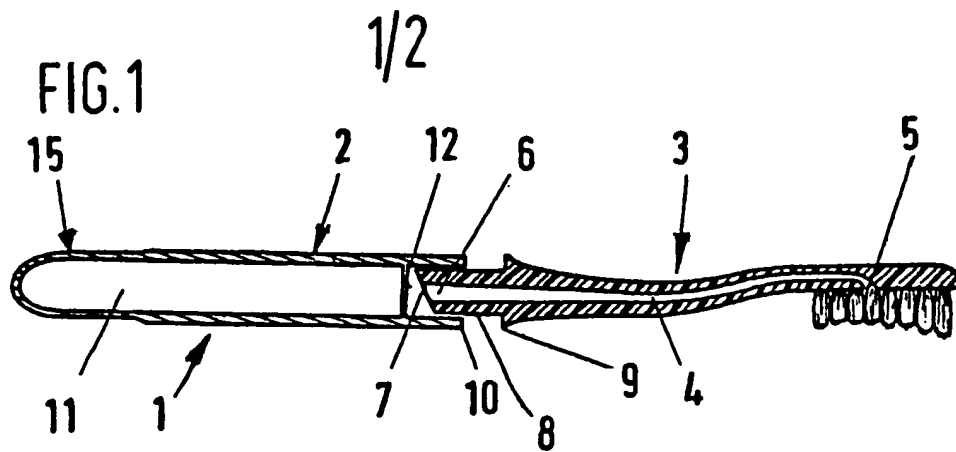


FIG. 5

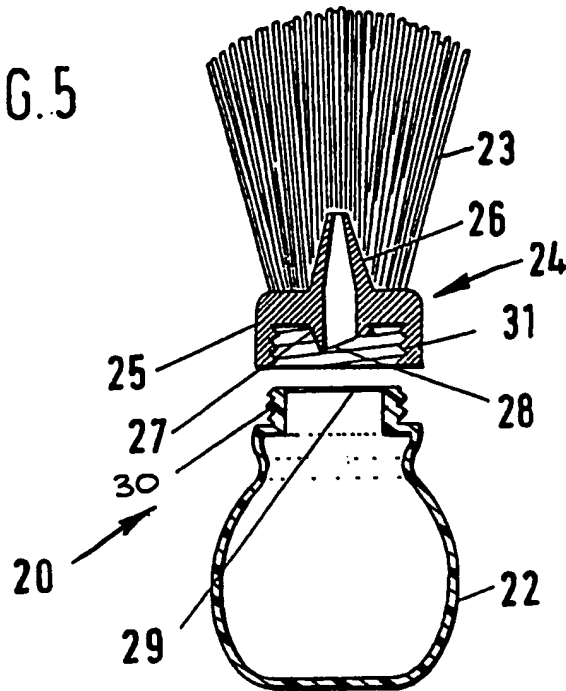
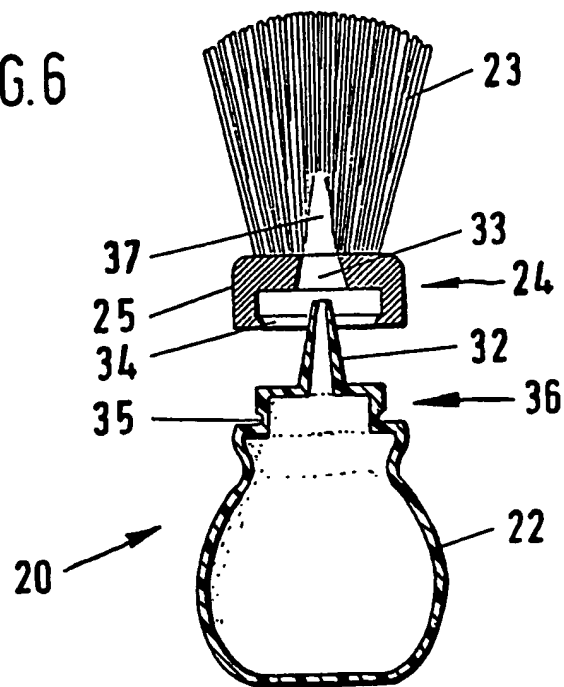


FIG. 6



## SPECIFICATION

## Toiletry brush

5 This invention relates to toiletry brushes such as toothbrushes or shaving brushes and it particularly relates to brushes having a detachable reservoir for a toiletry to be dispensed among the brush bristles.

10 According to the present invention, a toiletry brush comprises a brush head and a detachable handle, the head and handle being complementarily shaped to connect and engage one another, the head having a duct between the handle connection and a bristle array on the head and the handle being a hollow reservoir for a toiletry and at least partially resiliently deformable; whereby a toiletry can be forced out of the reservoir handle through the duct to be dispensed among the bristles.

20 In one embodiment, the toiletry brush is a toothbrush with the reservoir handle containing a dentifrice liquid or paste. Such a toothbrush is easy to use and is readily portable, because the dentifrice is incorporated in the handle. For such use, the toothbrush may be provided with a cap having a pocket clip thereon.

30 The toothbrush is conveniently formed from plastics material with the reservoir handle being transparent, to enable its contents to be readily determined.

35 In this embodiment, the brush head is elongate with a conventional array of bristles at one end, the duct runs the length of the head to the connection end which has a peripheral step and the reservoir handle has a mouth to receive the stepped end of the brush head, which mouth is sealed by a rupturable membrane. By this means, the handle reservoir is sealed until a brush head is connected to the handle, the brush head connection end entering the handle mouth and penetrating or rupturing the membrane; the brush head connection end being shaped to facilitate rupturing the membrane. The end of the reservoir handle remote from the mouth has a thinner, flexible wall to assist elastic deformation of the reservoir handle.

50 In another embodiment, the toiletry brush is a shaving brush with the reservoir handle containing a liquid or semi-liquid soap product or like shaving cream. The brush head comprises a bunch of bristles fixed to a base or holder itself coupled and secured to the reservoir handle, a nozzle is provided to communicate between the reservoir handle and the bristles. In one form, the nozzle is formed in the brush head and the lower end of the nozzle is

60 shaped to penetrate or rupture a membrane sealing the reservoir handle. Any suitable coupling arrangement between the brush head and handle may be employed, such as a screw-thread or snap-fit. The reservoir handle 65 is provided with flexible, elastic walls to per-

mit it to be easily deformed and recover each time a user stops applying pressure to it.

70 Once the brush head is coupled to the reservoir handle, each time pressure is applied to the reservoir wall a quantity of soap product is conveyed to the bristles, thus enabling the user to shave conveniently and quickly without needing to have a separate soap supply and apply this to the brush or his face.

75 To facilitate rupture of the reservoir membrane, the nozzle end may be shaped to have a cutting edge and/or the membrane may have a weakened area.

80 In an alternative, the nozzle is an integral part of the reservoir handle, extending up through a central opening in the brush head.

Gaskets may be provided to seal between the brush head and the reservoir handle.

85 The above and other features of the present invention are illustrated, by way of example, in the drawings, wherein:

Fig. 1 is a sectional view of a toothbrush in accordance with the invention;

90 Fig. 2 is a detailed cross-section of one form of brush head connection end;

Fig. 3 is a detailed cross-section of an alternative form of brush head connection end;

Fig. 4 is a view of a toothbrush with a cap;

95 Fig. 5 is a sectional view of one embodiment of a shaving brush in accordance with the invention; and,

Fig. 6 is a sectional view of another embodiment of a shaving brush.

100 Fig. 1 shows a toothbrush 1 comprising a handle 2 and a brush head 3.

105 The brush head 3 contains a duct 4, one of whose ends 5 communicates with the bristle part while the other end 6 is bevelled and forms part of the end 7 which is also bevelled and which is the end of a part 8 of the brush head which defines a peripheral step 9 against which the handle end 10 abuts.

110 The dentifrice liquid or paste which is arranged inside the reservoir 11 defined by the handle 2 is not shown.

115 The reservoir is closed by means of a thin wall or membrane 12 which is perforated or partially detached by the bevelled end part 7 of the brush head, when pressure is exerted on it.

120 Fig. 2 shows the structural form of the end part 8 which has at its respective free end a central recess 13 which defines an entry zone into the channel 4.

Fig. 3 shows an alternative form of end area 8 comprising in its free end area a frusto-conical portion 14 which assists the detachment of the thin wall 12 of the reservoir.

125 Similarly the handle 2 has a thinner end area 15 which is easily deformable by means of pressure so as to facilitate the displacement of dentifrice liquid or paste towards the respective end area of the channel 4 in the brush body.

130 Finally, the brush 1 comprises a cap 16

fitted with a clip 17 to fix it, for example, to a garment pocket. Said cap serves to protect the brush body from becoming dirty. In order for air to reach the bristles orifices 18 have been provided in the cap body.

A shaving brush 20, as is shown in Fig. 5, comprises a handle 22 and a bunch of bristles 23 fixed to a brush head or holder 24.

The holder 24 is shaped as a cap 25 with, in its central part, a nozzle 26 having a lower extension 27 with a bevelled end 28 by means of which the membrane or wall 29 of the reservoir is ruptured when the reservoir is coupled by its threaded part 30 to the inner thread 31 of the cap body formed by the bristle holder.

Fig. 6 shows that the reservoir or handle 22 comprises an extension in the form of a nozzle 32 which passes through a central hole 33 made in the straight part of the holder 24. In this case the holder 24 comprises an inner circumferential rib 34 at its end which assists in coupling as a snap-fit the holder 24 to a circumferential recess 35 of the same shape defined in the upper part 36 of the reservoir.

In the coupling arrangement of Fig. 2 the bunch of bristles comprises a free space 37 to allow easy coupling of the reservoir nozzle 32.

30

#### CLAIMS

1. A toiletry brush comprising a brush head and a detachable handle, the head and handle being complementarily shaped to connect with and engage one another, the head having a duct between the handle connection and a bristle array on the head and the handle being a hollow reservoir for a toiletry and at least partially resiliently deformable; whereby toiletry can be forced out of the reservoir through the duct to be dispensed among the bristles.

2. A brush as claimed in claim 1, wherein the reservoir handle is sealed by a membrane and the brush head is adapted to penetrate or rupture the membrane when the reservoir handle is connected to the brush head.

3. A toothbrush as claimed in claim 1 or claim 2, wherein the brush head is elongate with a conventional array of bristles at one end, the duct runs the length of the head to the other connection end which has a peripheral step and the reservoir handle has a mouth to receive the stepped connection end of the brush head.

4. A toothbrush as claimed in claim 3, wherein the brush head connection end is bevelled to assist rupture of the reservoir membrane.

5. A toothbrush as claimed in claim 3, wherein the brush head connection end is tapered to assist rupture of the reservoir membrane.

6. A toothbrush as claimed in any of claims 3 to 5, wherein the end of the reservoir handle remote from the mouth has a thin,

flexible wall to assist elastic deformation of the reservoir handle.

7. A shaving brush as claimed in claim 1 or claim 2, wherein the brush head comprises a bunch of bristles fixed to a base or holder, the duct being a nozzle provided to convey the contents of the reservoir handle to the bristles.

8. A shaving brush as claimed in claim 7, wherein the nozzle is formed in the brush head and the lower end of the nozzle is shaped to penetrate or rupture a membrane sealing the reservoir handle.

9. A shaving brush as claimed in claim 7, wherein the nozzle is part of the reservoir handle, extruding up through a central opening in the brush head.

10. A shaving brush as claimed in any of claims 7 to 9, wherein the brush head has a screw coupling with the reservoir handle.

11. A shaving brush as claimed in any of claims 7 to 9, wherein the brush head has a snap coupling with the reservoir handle.

12. A toiletry brush substantially as described with reference to and as shown by Figs. 1 to 4 or Figs. 5 and 6 of the Drawings.

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